

REMARKS

Claims 1-6 have been amended to further patentably distinguish the invention over the prior art. Claims 7 and 16 are presented without amendment for reconsideration in the light of the following authorities and remarks.

Claims 8-15 and 17-41 have been cancelled without prejudice to incorporating them in a child application. Such cancellations of and amendments to claims are only for the purpose of expediting the prosecution of this application and are not to be construed as an abandonment of any of the novel concepts disclosed therein.

The office action states:

Claims 1, 5, 7 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Scofield (US 6,853,732 B2).

With respect to claim 1, Scofield discloses an audio system including a plurality of channels (fig.3 #54,56), comprising: a listening area (fig.3 #64), comprising a plurality of listening spaces (fig.3 "spaces occupied by listeners #26"); a directional audio device (fig.3 #58,60), positioned in a first of said listening spaces, close to a head of a listener (fig.3 #26), for radiating first sound waves corresponding to components of one region for receiving the said channels; and a nondirectional audio device (fig.3 #52), positioned inside said listening area and outside said listening space, distant from said listening space, for radiating sound waves corresponding to components of a second of said channels (col.4 In.58-63).

With respect to claim 5, Scofield discloses an audio system in accordance with claim 1, wherein said listening area comprises a theater and said first and second listening spaces comprise seating locations within said theater (col.1 In.33-36).

With respect to claim 7, Scofield discloses a method for operating an audio system for radiating sound into a first listening space and a second listening space, said first listing space adjacent said second listening space (fig.3 "spaces occupied by listeners #26"), comprising: receiving first audio signals (fig.3 "L,R"); transmitting first audio signals (fig.3 #54,56) to a first transducer (fig.3 #52, col.4 In.21-25); transducing, by said first transducer, said first audio signals into first sound waves corresponding to said first audio signals; radiating said first sound waves into a first listening space; processing said first audio signals to provide delayed first

audio signals, wherein said processing comprises at least one of time delaying said audio signals and phase shifting said audio signals (col.4 In.37-45); transmitting said delayed first audio signals to a second transducer (fig.3 #58,60); transducing, by said second transducer, said delayed first audio signals into second sound waves corresponding to said delayed first audio signals; and radiating said second sound waves into said second listening space (fig.3).

With respect to claim 16, Scofield discloses a method for radiating audio signals comprising: radiating sound waves corresponding to first audio signals (fig.3 "R") directionally to a first listening space (fig.3 #58,60, "spaces occupied by listeners #26"); radiating sound waves corresponding to second audio signals (fig.3 "L") directionally to a second listening space (fig.3 #58,60, "spaces occupied by listeners #26"); and radiating sound waves corresponding to third audio signals nondirectionally to said first listening space and said second listening space (fig.3 #52, col.4 In.58-63).

Pp. 2-4.

This ground of rejection is respectfully traversed.

"It is well settled that anticipation under 35 U.S.C. 102 requires the presence in a single reference of all of the elements of a claimed invention." *Ex parte Chopra*, 229 U.S.P.Q. 230, 231 (BPA&I 1985) and cases cited.

"Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim." *Connell v. Sears, Roebuck & Co.*, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983).

"This court has repeatedly stated that the defense of lack of novelty (i.e., 'anticipation') can only be established by a single prior art reference which discloses each and every element of the claimed invention." *Structural Rubber Prod. Co. v. Park Rubber Co.*, 223 U.S.P.Q. 1264, 1270 (Fed. Cir. 1984), citing five prior Federal Circuit decisions since 1983 including *Connell*.

In a later analogous case the Court of Appeals for the Federal Circuit again applied this rule in reversing a denial of a motion for judgment n.o.v. after a jury finding that claims were anticipated. *Jamesbury Corp. v. Litton Industrial Prod., Inc.*, 225 U.S.P.Q. 253 (Fed. Cir. 1985).

After quoting from *Connell*, "Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim," 225 U.S.P.Q. at 256,

the court observed that the patentee accomplished a constant tight contact in a ball valve by a lip on the seal or ring which interferes with the placement of the ball. The lip protruded into the area where the ball will be placed and was thus deflected after the ball was assembled into the valve. Because of this constant pressure, the patented valve was described as providing a particularly good seal when regulating a low pressure stream. The court quoted with approval from a 1967 Court of Claims decision adopting the opinion of then Commissioner and later Judge Donald E. Lane:

[T]he term "engaging the ball" recited in claims 7 and 8 means that the lip contacts the ball with sufficient force to provide a fluid tight seal. *** The Saunders flange or lip only sealingly engages the ball 1 on the upstream side when the fluid pressure forces the lip against the ball and never sealingly engages the ball on the downstream side because there is no fluid pressure there to force the lip against the ball. The Saunders sealing ring provides a compression type of seal which depends upon the ball pressing into the material of the ring. *** The seal of Saunders depends primarily on the contact between the ball and the body of the sealing ring, and the flange or lip sealingly contacts the ball on the upstream side when the fluid pressure increases. 225 U.S.P.Q. at 258.

Relying on *Jamesbury*, the ITC said, "Anticipation requires looking at a reference, and comparing the disclosure of the reference with the claims of the patent in suit. A claimed device is anticipated if a single prior art reference discloses all the elements of the claimed invention as arranged in the claim." *In re Certain Floppy Disk Drives and Components Thereof*, 227 U.S.P.Q. 982, 985 (U.S. ITC 1985).

Claim 1 as amended calls for an audio system including a plurality of channels intended to be radiated in a predetermined positional relationship to the listener and a directional audio device positioned in a first of the listening spaces close to a head of a listener for radiating first sound waves corresponding to components of a first of said channels and a nondirectional audio device positioned inside the listening area and outside the first of said listening spaces distant from the first of said spaces for radiating sound waves corresponding to components of a second of said channels.

The reference does not disclose a nondirectional audio device for radiating sound waves corresponding to components of a second of the plurality of channels intended to be radiated in a predetermined positional relationship relative to the listener.

The Examiner has identified low frequency speaker 52 which receives from signal conditioner 44 the combination of left and right signals for frequencies below 250HZ, there being no left or right distinctions made in speaker 52 while the left and right signals on lines 46 and 48, respectively, are output as separate signals on left and right lines 54 and 56 to localized speakers 58 and 60 which are disposed proximate to the ears of listener 26. If localized speakers 58 and 60 are regarded as the directional audio device for radiating first sound waves corresponding to components of a first of said channels, which is the left and right signals, then it is impossible to read low frequency speaker 52 as a non directional audio device for radiating sound waves corresponding to components of a second of said channels, for it radiates components of the first of said channels.

Accordingly, withdrawal of the rejection of claims 1 and 5 as anticipated by the reference is respectfully requested.

The reference does not anticipate claim 7 or 16. Claim 7 calls for an audio system for radiating sound into first and second adjacent listening spaces including receiving first audio signals, transmitting the first audio signals to a first transducer that radiates corresponding first sound waves into a first listening space, processing the first audio signals to provide delayed first audio signals transmitted to a second transducer that transducers the delayed first audio signals into corresponding second sound waves and radiating the second sound waves into the second listening space.

The reference only discloses combining the spectral components of the left and right signals below 250HZ that is delivered to low frequency speaker 52 remote from a listening space. There is no disclosure of processing first audio signals to provide delayed first audio signals and transducing the delayed first audio signals to provide second sound waves radiated into the second listening space.

Claim 6 calls for radiating sound waves corresponding to first and second audio signals directionally to first and second listening spaces and radiating sound waves corresponding to third audio signals non directionally to the first listening space and the second listening space. The reference only discloses in column 4, line 66 through column 5, line 26 radiating the sound waves by localized speakers in fixed position relative to the head. The reference only discloses adjusting the sound level so that a listener does not hear the sound emitted in an adjacent seat.

Accordingly, withdrawal of the rejection of claims 1, 5, 7 and 16 as anticipated by the reference is respectfully requested. If this ground of rejection is repeated, the Examiner is respectfully requested to quote verbatim the language in the reference regarded as corresponding to each limitation in the rejected claims.

The office action states:

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scofield (US 6,853,732 B2) in view of Iwahara (US 4,199,658).

With respect to claim 2, Scofield discloses an audio system in accordance with claim 1, wherein said directional audio devices comprise a plurality of acoustic drivers (fig.3 #58,60), however does not disclose expressly wherein said acoustic drivers are positioned and arranged to radiate sound waves that interfere destructively at a first predetermined location in space and to interfere nondestructively at a second predetermined location in space.

Iwahara discloses an audio system wherein a plurality of acoustic drivers (fig.1 #1-4) are positioned and arranged to radiate sound waves that interfere destructively at a first predetermined location in space and to interfere nondestructively at a second predetermined location in space (col.1 In.37-68, col.2 In.1-2).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the crosstalk cancellation system of Iwahara in the invention of Scofield. The motivation for doing so would have been to cancel inter-aural interferences between the right and left ears of a listener.

With respect to claim 3, Scofield discloses an audio system in accordance with claim 2 in view of Iwahara, wherein said first predetermined location is in a first listening space and said second predetermined location is in a second listening space (Iwahara: col.1 ln.57-66).

With respect to claim 4, Scofield discloses an audio system in accordance with claim 2 in view of Iwahara, wherein said first predetermined location is proximate a first volume for receiving a first ear of a listener and wherein said second predetermined location is proximate a second volume for receiving a second ear of said listener (Iwahara: col.1 ln.57-66).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scofield (US 6,853,732 62).

With respect to claim 6, Scofield discloses an audio system in accordance with claim 1, however does not disclose expressly wherein said listening area comprises a vehicle passenger compartment and said listening locations comprise seating locations within said vehicle passenger compartment. Official Notice is taken that it is well known in the art that vehicles contain audio systems. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the audio system of Scofield in an automobile. The motivation for doing so would have been to provide a virtual sound system within the cabin of a vehicle so as to provide a realistic reproduced sound to a passenger. Pp. 4-6.

This ground of rejection is respectfully traversed. Claims 2-4 are dependent upon and include all the limitations of claim 1, and the reasoning in support of the patentability of claim 1 over the primary reference is submitted to support the patentability of claims 2-4. Since the primary reference does not anticipate claim 1, it is impossible to combine the primary and secondary references to meet the limitations of claims 2-4.

"Moreover, we observe that even if these references were combined in the manner proposed by the examiner, that which is set forth in appellant's claims . . . would not result." *Ex parte Bogar*, slip op. p.7 (BPA&I Appeal No. 87-2462, October 27, 1989). "Even if we were to agree with the examiner that it would have been obvious to combine the reference teachings in the manner proposed, the resulting package still would not comprise zipper closure material that terminates short of the end of the one edge of the product containing area, as now claimed." *Ex*

parte Schwarz, slip op. p.5 (BPA&I Appeal No. 92-2629 October 28, 1992). "Although we find nothing before us indicating why it would be desired to combine the references in the manner urged by the examiner, it is clear to us that such a modification by itself would not result in that which is set forth in the claims." *Ex Parte Kusko*, 215 U.S.P.Q. 972, 974 (BPA&I 1981).

That it is impossible to combine the primary and secondary references to meet the limitations of claims 2-4 is reason enough for withdrawing the rejection of them.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scofield (US 6,853,732 B2).

With respect to claim 6, Scofield discloses an audio system in accordance with claim 1, however does not disclose expressly wherein said listening area comprises a vehicle passenger compartment and said listening locations comprise seating locations within said vehicle passenger compartment. Official Notice is taken that it is well known in the art that vehicles contain audio systems. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the audio system of Scofield in an automobile. The motivation for doing so would have been to provide a virtual sound system within the cabin of a vehicle so as to provide a realistic reproduced sound to a passenger. Pp. 5-6.

This ground of rejection is respectfully traversed. Claim 6 is dependant upon and includes all the limitations of claim 1, and the reasoning set forth above in support of the patentability of claim 1 is submitted to support the patentability of claim 6 so that further discussion is submitted to be unnecessary.

The curtsey of the Examiner in making a diligent search is acknowledged with appreciation. The references cited, but not applied, have been examined, and are submitted to be incapable of anticipating, suggesting or making obvious the subject matter as a whole of the invention disclosed and claimed in this application.

In view of the forgoing cancellations, amendments, authorities, remarks and the inability of the prior art, alone or in combination, to anticipate, suggest or make obvious the subject matter as a whole of the invention disclosed and claimed in this application, all the claims are submitted to be in a condition for allowance, and notice thereof is

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respectfully requested. If the Examiner believes the application is not in a condition for allowance, he is respectfully requested to telephone the undersigned attorney at 617-521-7014 to discuss what additional steps he believes are necessary to place the application in a condition for allowance.

Please apply any charges or credits to deposit account 06-1050, order 02103-519002.

Respectfully submitted,
FISH & RICHARDSON, P.C.

24 September 24, 2007
Date: _____

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